Case Study

Learning the Lessons of Crisis: Mobilising Knowledge During a Global Health Emergency

Cleaners in Freetown, Sierra Leone have the task to completely disinfect the ambulance with chlorine after it carried a patient suspected to be infected with Ebola.
IMAGE: UNMEER/FLICKR, CC BY-ND 2.0

Responding effectively to outbreaks, epidemics, and pandemics requires a certain amount of knowledge use and carry-over from one context to another. However, no two health emergencies are ever precisely the same. The variation in social context, political setting, aetiological agent, time horizon, geography, and a whole host of other factors, makes each emergency unique. Further to this, global or national emergencies are often composed of emergencies in multiple localities, each with their own complex challenges and problems. This diversity in response contexts makes using knowledge from other areas of an emergency, or from past emergencies, difficult. This SSHAP Case Study draws on an investigation of lessons from the 2013-16 West African Ebola Virus Disease (EVD) crisis.

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The challenge

During the response to the West African Ebola crisis, a number of individuals with context experience, but little or no experience in responding to a global health emergency, were mobilised. In addition, a number of medical responders were 'parachuted in', which meant that they lacked knowledge of the context. In this way, individuals responding to the crisis tended to have only partial knowledge – either of the context or of the disease side of the response. This is a simple dichotomy, but if we expand this to more categories of knowledge then it would be even more stark.

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This scenario is exemplified by one team responding to the 2013-16 EVD outbreak in Sierra Leone, who had good knowledge of the context but very little experience in dealing with Ebola. In this case, a number of problems were encountered, including difficulty in knowing how to properly decontaminate an ambulance that was being used to support the response. This is important because the bodily fluids of Ebola-infected patients remain infectious for days after the patient has been transported, and ineffective decontamination puts first-responders at even higher risk.

> ***"Learning from epidemics is inhibited by the lack of access to knowledge accrued from previous outbreaks, rather than a lack of knowledge production."***

As part of our research, after the outbreak, we undertook interviews with responders to find out how they found and used knowledge in the response. One of the responders was responsible for an aid organisation's response and detailed a story which exemplifies many of the challenges in finding and using knowledge in outbreaks. In an interview, this responder reflected, 'It was really remarkable, we felt like we were doing this stuff for the first time, like no one in the world had ever decontaminated an ambulance'. After the fact, the same responder noted that 'a couple of months later, [the person doing it] finds that there's whole textbooks on this'. Although the knowledge was readily available in written form, it was difficult to find. The responder stated that in terms of locating it, 'the availability of that technical information, that how-to information, was surprisingly inaccessible'.

This lack of readily accessible knowledge was highlighted by the responder for more than just ambulance decontamination: 'A lot of the time we were scrambling around as though this stuff hadn't been done... it's not even that you can't find [knowledge], you don't even know to look for it'.

Learning from epidemics is inhibited by the lack of access to knowledge accrued from previous outbreaks, rather than a lack of knowledge production. This often leads to the symptom of 'reinventing the wheel' in responses, where responders feel like they are doing everything for the first time.

Who knows what?

One factor that this case study highlights is the issue of knowledge localisation; what an individual knows is not always easily transferred to others. Therefore, knowing *who knows what* is an important aspect of learning from epidemics. By knowing who has the appropriate knowledge, responders can more easily source crucial information that can enable them to solve problems in the response effort. In the responder's words: 'I was constantly coming across people who I thought knew stuff... we could use for the broader response and I would drive them along to the coordination meetings'.

Importantly, however, while knowledge of the processes and procedures themselves are localised, *so is knowing where to look and who to ask for this information*. Having a network of people who can recommend someone to ask or somewhere to go for new knowledge is of great value. Our responder noted that finding these individuals 'was such an arbitrary process and there were a lot of times when I wouldn't run into that person [in the hotel lobby]' and so would miss out on gaining vital expertise. Insofar as finding individuals with valuable knowledge, this often happens either by chance or through pre-established personal connections.

In addition to this, a source must be trusted. The early response to Ebola saw 'a lot of random people trying to help out' (same responder), which was not necessarily helpful. One issue was the sense that sources like the US Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) were the 'right' sources to consult. As our

responder noted, 'This was one of my mistakes... I was more reluctant than some people to go to alternatives'. Not looking beyond standard or traditional sources of information may harm the translation of non-traditional lessons from prior outbreaks into future outbreaks.

However, this trust can also be distributed by more traditional actors. The UK Department for International Development (DFID), for example, established a helpdesk to which responders could submit questions. These questions were then distributed to pre-selected university academics who would provide answers to problems faced in the EVD response within two to three days. This delegation of trust and authority enabled knowledge outside of the 'right' sources to reach the response.

Asking good questions

Using the DFID helpdesk posed another challenge for learning from previous responses: asking 'good' questions. In our responder's case, the challenge was that the problems were so complex or unclear that the questions being asked were incredibly ill-defined (e.g. how to engage communities, how to communicate with the public, etc.). This contrasted with some of the questions our responder's medical colleagues were asking, which were very well-defined (e.g. exact dosages, treatment protocols, etc.), allowing them to quickly obtain specific and actionable answers.

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This capacity to ask focused, problem-centred questions is essential when searching for knowledge for two reasons: (1) responders do not have time to sift through helpdesk responses with multiple options, and (2) those giving knowledge need a focus around which to formulate a response. However, this is not always possible in an epidemic response where the social or political problems are complex phenomena with no simple, single, causal relationship that can be easily leveraged in a solution. Simple answers to these questions therefore require a good amount of innovation and further problem solving to implement.

Lessons learned

The lessons learned from this case study come in two categories: lessons for those sharing knowledge, and lessons for those *searching* for knowledge.

Knowledge always comes from some*one* or some*where*:

- **When sharing:** Be visible so that those who are looking for answers can easily find you. This can be achieved simply by tweeting updates, writing blog posts, sharing others' blog posts and collating information from other sources (always crediting those sources); or by writing a commentary, editorial, or op-ed. This profile-raising needs to be cultivated over time so that the reputation built will be visible in the chaos of an emergency.
- **When searching:** Look for people who may have answers as well as searching for specific knowledge. Through networking beyond your field and outside of your typical workplace, you can cultivate a set of pre-existing connections to turn to in a crisis. As seen in the case study, the important factor is *knowing who knows* how to disinfect an ambulance, not just the answer to the question.

A source needs to be trusted in order to inform responses:

- **When sharing:** Promote yourself, not just your knowledge. While it is often the case that single sources (e.g. publications, papers, reports, etc.) are cited by policymakers for policy changes, these are backed up by substantial prior work and the established reputation built up by the authors. This, together with personalisation, helps responders to identify who they can trust, and therefore where to seek information.
- **When searching:** Consider who is trusted by whom. Look at who is being promoted by 'official' sources and utilise their expertise. Official sources are useful centres of information that streamline an ever-increasing stock of knowledge into guidelines, protocols, etc. However, this also means that much of the expertise is streamlined out. Knowing who is behind these guidelines and protocols enables you to access the deep expertise needed for adapting guidelines into real-world solutions.

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The question determines the answer:

- **When sharing:** Include details in the answer to allow for easier adaptation. No solution is completely transferrable from its own context; the circumstances in which a problem arises are the circumstances in which a solution must be implemented. Abstract knowledge and proposals will need to be integrated into the user's context, so those sharing knowledge should be prepared to collaborate with users to adapt and innovate.
- **When searching:** Ask questions with more specificity. Being open about *why* a question is being asked enables experts to tailor advice to your needs. Be sure to provide as much contextual detail as possible (within the bounds of confidentiality, where appropriate) and to collaborate with sources to adapt and innovate solutions.

Overall, the main lesson learned from this case study is that learning is a two-way street. Knowledge sharers and knowledge seekers have equal responsibility, but intermediaries (such as DFID's helpdesk, or SSHAP) can be crucial facilitators of seeking and sharing knowledge.

About

The Social Science in Humanitarian Action Platform (SSHAP) aims to establish networks of social scientists with regional and subject expertise to rapidly provide insight, analysis and advice, tailored to demand and in accessible forms, to better design and implement emergency responses. SSHAP is a partnership between the Institute of Development Studies (IDS), the London School of Hygiene and Tropical Medicine (LSHTM), Anthrologica and UNICEF Communication for Development (C4D).

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Credits

This SSHAP Case Study was produced by **Joshua R. Moon**, Science Policy Research Unit (SPRU) at the University of Sussex, and was adapted from a case study in his PhD thesis titled 'Knowledge Accumulation from Disease Outbreak Response'.

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